

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP03/07541

Box No. IV Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

The subject matter of claim 1 relates to a technique in which (1) when a program is rewritten, the program is stored in an externally readable area of a second storing means, for judging its correctness, and (2) subsequently the program is stored in an externally unreadable area of the second storing means.

The subject matters of claims 2-4 relate to a technique in which after a program is rewritten, a specific portion only of the program is read.

The subject matters of claims 5 and 6 relate to a technique in which after a program is rewritten, the program is partially executed.

The subject matters of claims 7-14, 16, 17, 28 and 39 relate to a technique in which when a program is rewritten, the correctness of the program is judged.

The matters for specifying the subject matters of claims 15 and 18 are expressed as choices, and the choices do not have similar functions. So, it is not considered that the subject matters of claims 15 and 18 form a single general inventive concept.

The subject matters of claims 19 and 30 relate to a technique in which (1) data is stored in an area accessible from outside and delivered to outside for judging whether or not the data is correctly stored, and (2) in the case where it is judged that the data is correctly stored, the data is stored in an area inaccessible from outside.

The subject matters of claims 22-27 and 33-38 relate to a technique in which only the result of executing the program stored in an area inaccessible from outside is delivered to outside.

4. Consequently, this report has been established in respect of the following parts of the international application:

- ☒ all parts.
- ☐ the parts relating to claims Nos. _____

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1, 15-19, 22-28, 30, 33-39	YES
	Claims	2-14	NO
Inventive step (IS)	Claims	1	YES
	Claims	2-19, 22-28, 30, 33-39	NO
Industrial applicability (IA)	Claims	1-19, 22-28, 30, 33-39	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Document 1: JP, 5-66937, A (Oki Electric Industry Co., Ltd.), 19 March, 1993 (19.03.93), all pages, all drawings (Family: none)

Document 2: JP, 63-240629, A (Nixdorf Computer AG), 6 October, 1988 (06.10.88), all pages, all drawings, & EP, 280035, A2, & US, 5224160, A

Document 3: JP, 62-67800, A (Hitachi, Ltd.), 27 March, 1987 (27.03.87), all pages, all drawings, & EP, 215464, A2, & US, 4777586, A, & US, 4905142, A

The subject matter of claim 1 appears to be novel and to involve an inventive step in view of the documents cited in the ISR. The documents do not describe that "(1) a program is stored in an externally readable area of a second storing means, for judging its correctness, and (2) subsequently the program is stored in an externally unreadable area of the second storing means." Furthermore, a person skilled in the art could not have easily conceived of this constitution from the constitution in which "(1) a program is stored in an externally readable area, for judging its correctness, and (2) subsequently the program is stored in an externally unreadable area."

The subject matters of claims 2-14 do not appear to be novel or to involve an inventive step in view of document 1 cited in the ISR.

Document 1 describes an invention of a data processing apparatus comprising (1) a storing means for storing a program, (2) an arithmetic processing means and (3) a preserving means, in which a changed portion of the program is preserved in the preserving means, and after it is judged to be correct, it is stored in the storing means.

It is considered to be obvious that after a changed portion of a program is stored in a storing means, the changed portion of the program is read and executed, in the invention described in document 1.

The subject matters of claims 15-18 do not appear to involve an inventive step in view of document 1 and document 2 cited in the ISR.

Document 2 describes an invention in which a program is encrypted and the encrypted program is compared with an inspector cipher, to confirm the integrity of the program.

A person skilled in the art could have easily conceived of employing the invention described in document 2 as the method for judging the correctness in the invention described in document 1.

The subject matters of claims 19, 22-28, 30 and 33-39 do not appear to involve an inventive step in view of documents 1 and 2 and document 3 cited in the ISR.

As described in document 3, a technique of inhibiting the output of a program to outside is merely well known.

A person skilled in the art could have easily conceived of storing a program in a storing means, the output from which to outside is inhibited, also in the invention described in document 1.

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. Clarity of the claims

Claims 1, 19, 22-24, 28, 30, 33-35 and 39

The matters, "an externally readable area," "an externally unreadable area," "an area accessible from outside" and "an area inaccessible from outside" stated in claims 1, 19, 22-24, 28, 30, 33-35 and 39, are not clear.

These statements are intended to specify the subject matters of these claims in terms of functions, but the particular constitution of the subject matters cannot be estimated from these statements only.

2. Support by the specification

(1) Claims 1, 19, 22-24, 28, 30, 33-35 and 39

The subject matters of claims 1, 19, 22-24, 28, 30, 33-35 and 39 are not sufficiently supported by the specification.

The specification describes, "can be realized if a switch is provided to ensure that the address bus from outside is connected with the externally unreadable area like the externally readable area, but that the data bus is not connected with the externally unreadable area when data is read to outside." Except this method, no particular method for realizing "the externally readable area," "the externally unreadable area," "the area accessible from outside" and "the area inaccessible from outside" is disclosed at all. Furthermore, it is not considered either that the content described in the specification can be interpreted to include a generic concept at the level of such matters as "the externally readable area," "the externally unreadable area," "the area accessible from outside" and "the area inaccessible from outside."

(2) Claims 5 and 6

The subject matters of claims 5 and 6 are not sufficiently supported by the specification. The specification describes that in order to confirm whether or not a rewritable program is correctly stored in a rewritable RAM in a semiconductor integrated circuit while keeping the program confidential, the program is stored and subsequently partially executed to judge whether or not it could be correctly executed. However, though claims 5 and 6 describe that a program is executed, they do not reflect a constitution for judging whether or not it could be correctly executed.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: I

Amendment made beyond the scope of the disclosure made when the present application was filed

Pages 9-11, 11/1 and 12-15 in the amended specification and claims 19, 22-24, 28, 30, 33-35 and 39 exceed the scope of the disclosure made when the present application was filed.

The amendment from the matter in which "an area accessible from outside is made to store data" into the matter in which "a storing means having an area accessible from outside is made to store data" is an addition of a matter not described in the specification submitted when the present application was filed.